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DONOR-ACCEPTOR PROPERTIES OF SULPHUR-NITROGEN-FLUORINE SYSTEMS

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From the high polarity of the SN-bond sulphur-nitrogen species are expected to exhibit as well donor (via N) as acceptor properties (at S), fluorinated derivatives may also act as fluoride-ion donors. In neutral molecules the donor properties are much more pronounced even in the presence of strong electron-withdrawing groups. The dependence of these donor properties on the oxidation state, coordination number and bonding situation of the sulphur, of F^- versus N-donation on the NSF-species and the accepting acid are discussed. Attempts to correlate charge-calculations, PE-spectroscopic data and experimental results for the donor strength is made. In SN-cations the acceptor properties dominate leading to highly electrophilic species. Their reactivity is compared with isoelectronic neutral phosphorus systems.